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Real Life Connections: Integrating Social Justice into the Elementary Mathematics Classroom

Caitlin Barnes
Illinois Wesleyan University

Robin Leavitt, Faculty Advisor
Illinois Wesleyan University

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Real Life Connections: Integrating Social Justice into the Elementary Mathematics Classroom



Caitlin Barnes, Educational Studies

Equality

Rank	Country	Gold	Silver	Bronze	Total	Rank by Total
1	United States	12	9	10	31	1
2	Australia	6	6	8	20	2
3	Great Britain	2	2	2	6	3
4	Japan	2		3	5	6
5	Germany	2		1	3	9
6	Netherlands	2			2	11
7	China	1	3	2	6	3
8	Zimbabwe	1	3		4	7
9	France	1	2	3	6	3
10	Russian Fed.	1	1	2	4	7
11	Italy	1	1		2	11
11	Korea	1	1		2	11
13	Brazl	1		1	2	11
14	Tunisia	1			1	16
15	Hungary		3		3	9
16	Norway		1	1	2	11
17	Slovenia		1		1	16
17	Serbia		1		1	16
19	Austria			1	1	16
19	Canada			1	1	16
19	Denmark			1	1	16
Total:		34	34	36	104	

<http://results.beijing2008.cn/WRM/ENG/INF/SW/C95/SW0000000.shtml>

- 1.What is the maximum (most medals won)? What country had the maximum?
- 2.What is the minimum (least medals won)? What country had the minimum?
- 3.What is the median amount of medals won?
- 4.What is the mode amount of medals won?
- 5.What is the mean amount of medals won?

Lesson Objective: for students to demonstrate their understanding of equality through class discussion and make connections from the lesson to their lives.

Mathematics Concept: Mean, Median, Mode, Maximum, Minimum

Discussion

- Why do you think there is only one African country represented on the chart?
- How could countries from all over the world be more equally represented?
- What inequalities have you seen in your life?

Findings

- The students were able to offer explanations as to why there was only one African country on the top twenty list of medal winners.
- The students were able to give realistic suggestions on how to give all countries an equal chance to go to the Olympics.
- The students demonstrated the ability to connect the mathematics lesson to their lives as they named the inequalities in their lives and offered solutions to solve the inequalities.

Guiding Questions for Inquiry: Do children understand the real life connection between math and social justice issues? How can I teach students about these issues using mathematics?

Labor

A sweatshop is a factory that does not pay workers on time or pay minimum wage (<http://www.globalexchange.org>). Many sweatshops can be found in Mexico and make many products for the United States. About 1 million workers work in these sweatshops. Most sweatshop workers make about 56 pesos (\$4) a day. A family of four needs about 1601 pesos (\$16) a day to survive in Mexico (<http://www.corpwatch.org/article.php?id=426>).

- If 100 sweatshop workers worked today in one factory, how much money would they make in pesos?
- In Mexico, a Big Mac costs about 29 pesos. How many pesos would it cost for a family of four to have one Big Mac each?
BONUS
- How many days would it take for one worker to earn enough money to buy four Big Macs?

Lesson Objective: for students to demonstrate their understanding of labor through class discussion and make connections to their lives

Mathematics Concept: Multiplication

Discussion

For the discussion portion of this lesson, I spent most of the time defining the term sweatshop because none of the students had heard the term before. After defining the term, the students struggled to make a connection between the social justice lesson and their own lives.

Findings

- The students learned the most from lessons that allowed them to make connects to their lives.
- The students benefitted from working as a group to complete the worksheet

Money

Name	Citizenship	Age	Net Worth (\$bil)	Residence
Warren Buffett	United States	77	62,000,000,000	United States
Carlos Slim Helu & family	Mexico	68	60,000,000,000	Mexico
William Gates III	United States	52	58,000,000,000	United States
Lakshmi Mittal	India	57	45,000,000,000	United Kingdom
Mukesh Ambani	India	50	43,000,000,000	India
Anil Ambani	India	48	42,000,000,000	India
Ingvar Kamprad & family	Sweden	81	31,000,000,000	Switzerland
KP Singh	India	76	30,000,000,000	India
Oleg Deripaska	Russia	40	28,000,000,000	Russia
Karl Albrecht	Germany	88	27,000,000,000	Germany
Li Ka-shing	Hong Kong	79	27,000,000,000	Hong Kong
Sheldon Adelson	United States	74	26,000,000,000	United States
Bernard Arnault	France	59	26,000,000,000	France
Lawrence Ellison	United States	63	25,000,000,000	United States
Roman Abramovich	Russia	41	24,000,000,000	Russia
Theo Albrecht	Germany	85	23,000,000,000	Germany
Liliane Bettencourt	France	85	23,000,000,000	France
Alexei Mordashov	Russia	42	21,000,000,000	Russia
Prince Alwaleed Bin Talal Al Saud	Saudi Arabia	51	21,000,000,000	Saudi Arabia
Mikhail Fridman	Russia	43	21,000,000,000	Russia

<http://www.whats-up.co.cc/2009/02/forbes-top-100-richest-in-world.html>

This is a list of the 20 richest people in the world. The chart lists their age, country they live in, and amount of money he or she possesses.

1. What is the maximum? Who is the richest person in the world?
2. What is the minimum? Who is the 20th richest person in the world?
3. What is the mode?

Lesson Objective: students to demonstrate their understanding of money through class discussion and make connections to their lives

Mathematics Concept: Maximum, Minimum, Mode

Discussion

- Do you think everyone in India or the United States can afford flu shots for their families?
- How can we help people who do not have a lot of money to get what they need?
- Have you ever donated money to people in need?

Findings

- The students demonstrated their learning of the differences in socioeconomic status between the residents of a country.
- The students demonstrated their understanding that not everyone has the money to buy things while others have the money to buy an excess of things.
- The students suggested ways in which people with money can help those in need.
- The students were able to recognize that their donations were similar to the donations made by the billionaires in the activity.